



FHWS

iOS Programmierung

(mit Swift)

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#FHWSSwift

Agenda

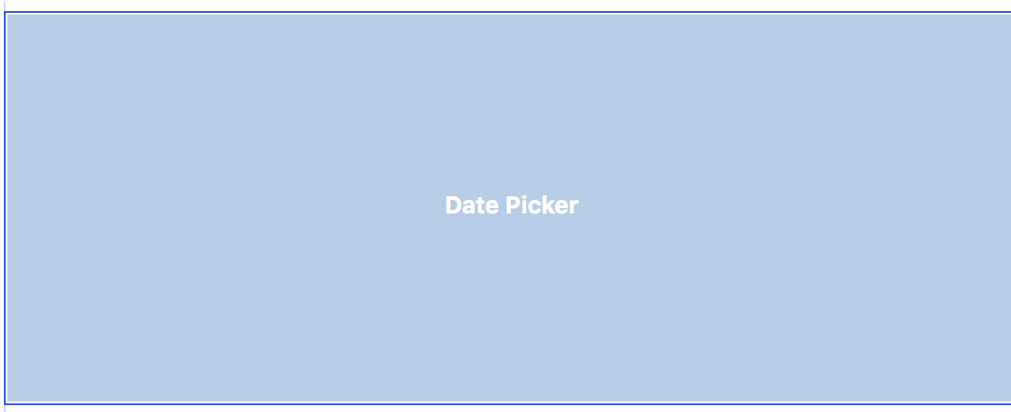
1. **Introduction** – Organisatorisches
2. **First iOS-Project** – Hello World, **First iOS-Project** – Still Hello World (now with Code 😊)
3. **Swift**, Wait!, What about Objective-C?, Why Swift?
4. **A (not so) Quick Tour**
5. **Documentation**
6. **The basics** – iOS Architecture & more
7. **User Interfaces** – View Controller, Auto Layout & Size Classes
8. **Storyboard & Segues**
9. **Tables & UINavigationController**
10. **TabBarController**
11. **Notifications**
12. **PickerViews**
13. **Touches, Gestures, 3D Touch, Peek & Pop**
14. **ScrollView & StackViews**
15. **Networking** – JSON & Dependency Managers
16. **WebKit**
17. **Maps**
18. **Storage & Data persistency** – UserDefaults, NSKeyedArchiver & Core Data
19. **ObjC**

User Interfaces

Picker View & NSDateFormatter

Pickers (1/3)

UIDatePicker



UIPickerView

Mountain View
Sunnyvale
Cupertino
Santa Clara
San Jose

Pickers (2/3)

UIDatePicker



December	30	1995
January	31	1996
February	1	1997
March	2	1998
April	3	1999
May	4	2000
June	5	2001

@IBAction

UIPickerView

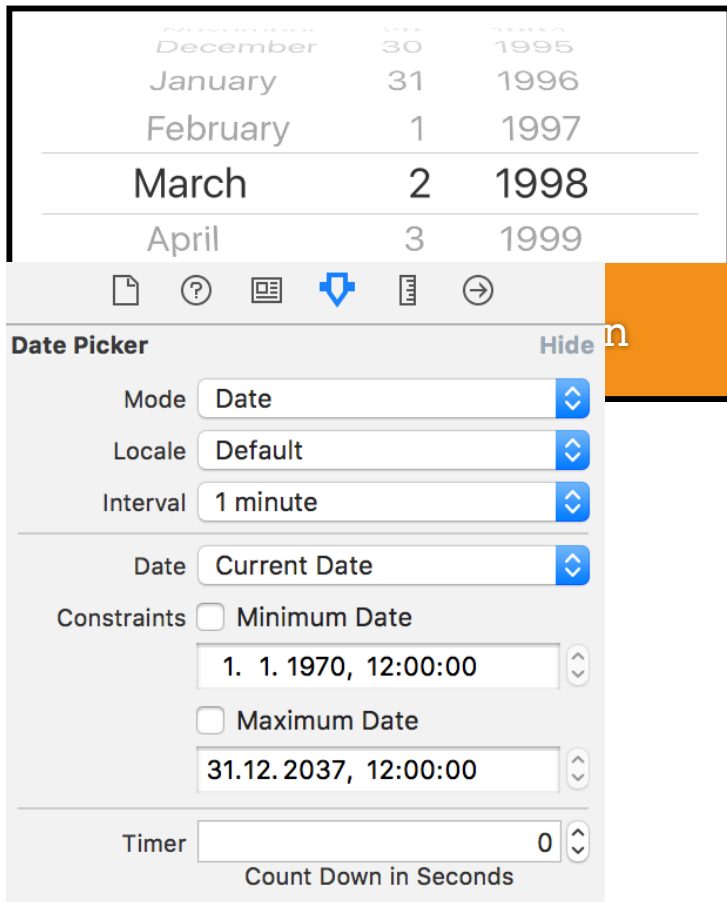
Mountain View
Sunnyvale
Cupertino
Santa Clara
San Jose

Informatik
Mathe
Physik

UIPickerViewDataSource,
UIPickerViewDelegate

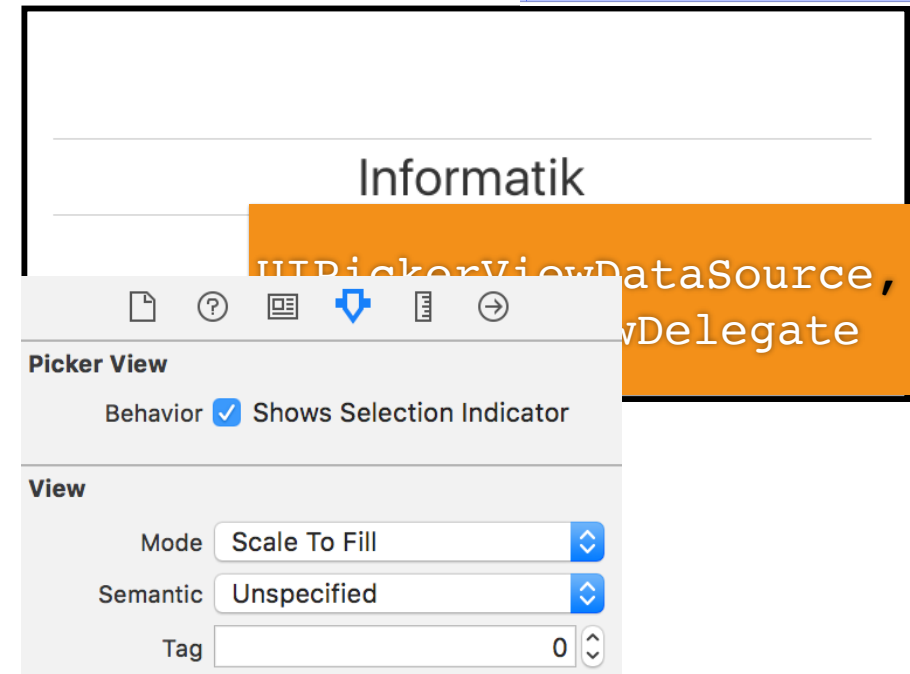
Pickers (3/3)

UIDatePicker



UIPickerView

Mountain View
Sunnyvale
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UIPickerView - DataSource

```
func numberOfComponentsInPickerView(  
    pickerView: UIPickerView  
    ) -> Int {  
    return 1  
}  
  
func pickerView(  
    pickerView: UIPickerView,  
    numberOfRowsInComponent component: Int  
    ) -> Int {  
    return courses.count  
}
```

UIPickerView - Delegate

```
func pickerView(  
    pickerView: UIPickerView,  
    titleForRow row: Int,  
    forComponent component: Int  
    ) -> String? {  
    return courses[row]  
}  
  
func pickerView(  
    pickerView: UIPickerView,  
    didSelectRow row: Int,  
    inComponent component: Int) {  
    let course = courses[row]  
    student.fach = course  
    fachLbl.text = course  
}
```


Common Patterns - Delegate

ViewController
(delegate)

UIPickerView

Create new UIPickerView
Set ViewController as UIPickerViewDelegate

```
func pickerView(numberOfRowsInComponentnent)
```

```
return courses.count
```

How many rows?

3

```
func pickerView(titleForRow row: Int)
```

```
return courses[row]
```

What is in cell 1?

Informatik

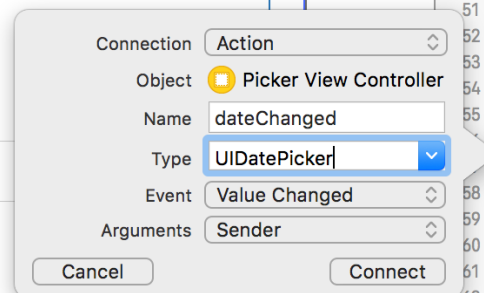
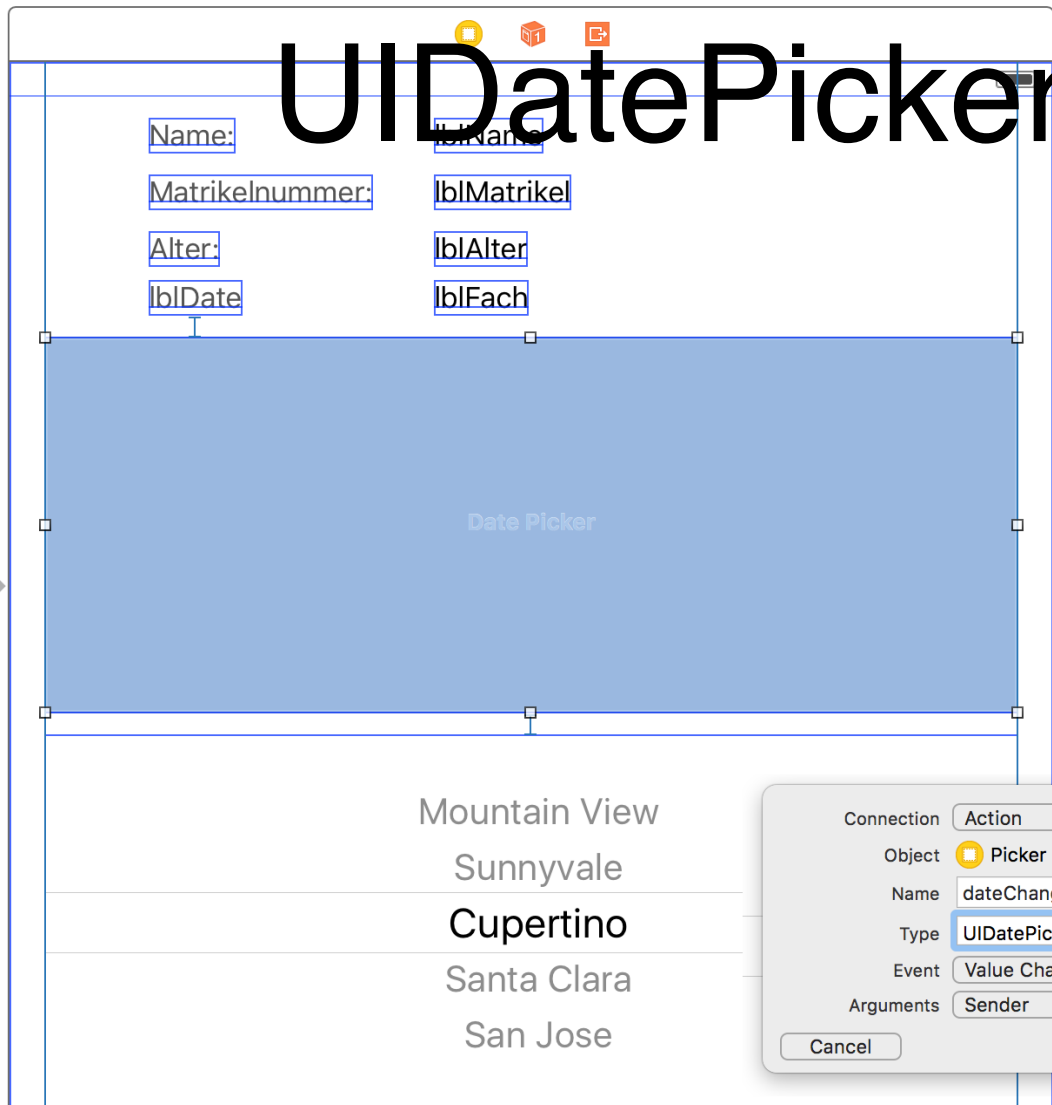
```
func pickerView(titleForRow row: Int)
```

```
return courses[row]
```

What is in cell 2?

Mathe
Physik

UIDatePicker - @IBAction



```

24     courses = ["Informatik", "Mathe", "Physik"]
25
26     student = Student(studentName: "Andy", studentMatNr: 1231)
27     nameLabel.text = student.name
28     matNrLbl.text = String(student.matNr)
29     fachLbl.text = String(student.fach)
30
31     matNrLbl.text = String(student.matNr)
32
33
34 }
35
36 //UIPickerViewDataSource
37 func numberOfComponentsInPickerView(pickerView: UIPickerView)
38     return 1
39 }
40
41 func pickerView(pickerView: UIPickerView, numberOfRowsInComponent: Int)
42     return courses.count
43 }
44
45 //UIPickerViewDelegate
46 func pickerView(pickerView: UIPickerView, titleForRow row: Int,
47     component: Int) -> String? {
48     return courses[row]
49 }
50
51 func pickerView(pickerView: UIPickerView, didSelectRow row: Int,
52     component: Int) {
53     let course = courses[row]
54     student.fach = course
55     fachLbl.text = course
56 }
57
58 @IBAction func dateChanged(sender: UIDatePicker) {
59 }
60
61 enum NSDateFormatPattern:String {
62     case clockTime = "HH:mm:ss"
63     case date = "dd-MM-YY"
64     case dateTimeWithMilliseconds = "yyyy-MM-dd HH:mm:ss,SSS ZZZ"
65     case dateTime = "yyyy-MM-dd HH:mm:ss"
66 }
67
68 extension NSDate {
69

```

NSDateFormatter

```
lblDate.text = sender.date.formattedDate()
```

```
extension NSDate {  
    func formattedStringForDate(format: String) -> String {  
        let formatter = NSDateFormatter()  
        let locale = NSLocale.currentLocale(); //de_DE  
  
        formatter.locale = locale  
        formatter.dateFormat = format  
  
        return formatter.stringFromDate(self)  
    }  
  
    func formattedClockTime() -> String {  
        return formattedStringForDate("HH:mm:ss")  
    }  
  
    func formattedDate() -> String {  
        return formattedStringForDate("dd-MM-YY")  
    }  
  
    func formattedDateTime() -> String {  
        return formattedStringForDate("yyyy-MM-dd HH:mm:ss")  
    }  
}
```

More User Interfaces

Demo

Apple's UIKit Catalog (iOS): Creating and Customizing UIKit Controls

<https://developer.apple.com/library/ios/samplecode/UICatalog/Introduction/Intro.html>